# Radiological Dispersal Device (RDD)—Version B

The Los Angeles County Department of Mental Health (DMH) has called you to respond to a large-scale disaster. You receive an incident briefing from your county DMH unit leader. In that briefing, you learn that the Los Angeles County Sheriff's Department is working in conjunction with the Los Angeles County Department of Public Health (DPH), because they have learned that a terrorist organization purchased cesium to make an RDD or "dirty bomb" and it has detonated the device this morning in downtown Los Angeles. Wind is carrying radioactivity from this aerosolized dispersion to an area covering 36 blocks of the explosion. Hundreds of businesses, apartment buildings, and government offices are potentially contaminated. The blast caused 180 fatalities; about 270 injured require medical care.

The entire scene is contaminated with cesium. First responders were not initially aware of the presence of cesium when they arrived on scene, and many of them are now concerned that they may have been exposed. In addition, up to 20,000 individuals in the primary survivor triage area potentially have detectable superficial radioactive contamination. The media are reporting that minor contamination may be an issue further downwind and are airing many interviews with frightened citizens.

Local hospitals in the area, already at maximum capacity with injuries from the blasts, are inundated with approximately 50,000 people who think that they have been contaminated. Hospital emergency department (ED) staff who are working with survivors from the explosion site have been exposed to gruesome images of burn/blast survivors as they enter the ED. Survivors from the explosion and their family members have also witnessed gruesome sites, sounds, and smells. Hospitals are reporting difficulties calming family members and patients who were already in the ED for nonexplosion-related emergency care because they fear they have been contaminated by blast survivors arriving at the ED.

During the initial phase of the disaster response, hospital staff were also not initially aware of the presence of cesium. Staff are now concerned that they were potentially contaminated because they were not wearing the proper personal protective equipment. Hospital staff also do not understand the short-term and long-term risks of cesium exposure. This uncertainty is creating anxiety and rumors and making staff hesitate to report to work or to remain at their assigned work location.

DPH officials and hospital infectious disease staff are working hard to distribute information about cesium. The following is the information they provide:

- In the long term, no one will suffer acute radiation syndrome, but approximately 20,000 individuals near the blast scene are likely to become externally contaminated.
- Low-level contamination may enter food and water supplies.
- The sum of the cumulative exposure is expected to result in an increased lifetime cancer risk proportionate to the dose.
- Injured people will require some decontamination in the course of medical treatment and before hospital admission.
- Thousands more will probably need superficial decontamination and both short-term and long-term medical follow-up.

Despite these public information efforts, hospitals are reporting that dozens of hospital clinical, administrative, and support/ancillary services staff are not showing up to work because they fear contamination, because they want to be close to their families, or because transportation into the area has been interrupted.

You are **assigned to the parking lot** of a local hospital (or clinic) that is experiencing a surge of victims, the injured, and survivors who are concerned about contamination. The hospital (or clinic) staff are using a decontamination trailer to decontaminate any person who might have been at or near the blast site. You report for duty. You have been assigned to the "cold" (or clean) zone, which is where people are waiting after they have been decontaminated. From your vantage point, at a distance from the "hot" and "warm" zones

where decontamination is being conducted, you see that facility security staff are doing their best to maintain order with the large crowd of people. Medical staff are moving through the crowd assessing who needs to be decontaminated first. Medical and security staff are all wearing decontamination suits, masks, and respirators. Staff assigned to the clean zone where you are stationed are not wearing any personal protective equipment.

While working alongside hospital (clinic) staff, you learn that many who were not initially exposed may have become exposed to cesium in the crowded conditions at the facility. The facility has just told you of the decision to have the local fire department spray the entire crowd with water from the fire truck and then wait for medical staff to determine who needs further decontamination. You also learn that police and the FBI have just arrived on scene and are now asking that people drop all of their possessions—including wallets, wet clothes, and car keys—into evidence bags. Hospital staff are passing out hospital gowns to people after they have been decontaminated.

You notice that staff are having difficulty because some individuals refuse to cooperate with the decontamination procedures. Some people will not disrobe because they are embarrassed or they cite religious reasons. Many in the crowd are spreading rumors that cesium will cause breathing difficulties, heart palpitations, and immediate death. Medical staff are using loud speakers to address the crowd and give accurate information, but many people are still anxious and do not understand what is going on. Some in the crowd do not speak English. Some seem frightened and uneasy with the presence of the police. Others will not stay in line because they cannot find their children. One mother starts screaming when her baby is taken away by medical staff to undergo further decontamination in the trailers. Other people in the clean zone are refusing to leave the area once they are medically evaluated and discharged as "clean" because they still do not feel safe. Others want to leave but cannot because they are wearing hospital gowns and/or because the police have kept their car keys as "evidence."

Draw on what you have learned in this course to address the following questions:

- What triggers of psychological response are you likely to encounter in this setting?
- What are your first priorities when you arrive in the cold zone of the decontamination area to provide assistance?
- What is your overall mission in this location?
- If other mental health (MH) staff are assigned with you, what suggestions might you make about how to divide tasks?
- How might you work with other hospital or clinic staff also assigned to "mental health," such as nurses, chaplains, child life specialists, etc.?
- How would you decide which patients need immediate assistance?
- How do you plan to work with those who arrive at the clean zone but are not assessed by the medical staff as being exposed to cesium?
- What short-term interventions might you use in this situation?
- What would you do to meet the needs of specific groups, such as children and non-English speakers?
- How might you begin to connect people with resources for longer-term MH interventions?
- What other resources might you need (e.g., MH brochures, information about cesium exposure, the "Zebra book"), and how might you get them?
- What do you think should be done about the potential MH needs you are noticing in other areas (in the hot and warm zones) where you are not assigned?
- What might you do to address the concerns of staff?
- What self-care strategies might you use to address your own stress concerns on scene and after the end of your shift?
- What tasks do you need to complete at the end of your shift to ensure continuity of care from the new shift coming in after you?
- Are there other considerations, unique to this situation, that you would like to address?